

# Space utilisation levels and the viability of courses

1. As space utilisation levels are reduced the area and required income per used workplace increases. The following table is based on a recommended space norm of 1.8 square metres in a class or seminar room and an annual space cost of £100 per square metre.

Space utilisation	Workplace m <sup>2</sup>	Cost per workplace
100%	1.80	£ 180
90%	2.00	£ 200
80%	2.25	£ 225
70%	2.57	£ 257
60%	3.01	£ 301
50%	3.60	£ 360
40%	4.50	£ 450
30%	5.99	£ 599
20%	9.00	£ 900
10%	18.00	£ 1800

In a university in which teaching space forms half the gross internal area the loading of all space costs onto revenue generating teaching space can double the area and required income per student workplace.

Space utilisation levels below 30%, based on a survey of all teaching facilities, produces steep increases in the required income per used workplace. The marked increases in costs may mean that many courses are not financially viable. To achieve more than a 40% space utilisation level, requires the introduction of demanding timetabling procedures. These actions do not produce significant reductions in the required income per used workplace.

2. The relationship of space utilisation levels to the required income per used workplace can be illustrated for a further education college.

2.1 Average unaudited annual space costs in a further education college are estimated to be £70 per square metre. Given an average workplace area of 3.5 square metres the average income per used workplace is £245 at a space utilisation level of 100%.

2.2 Teaching space should form half of the gross internal area of a college. Loading total space costs onto revenue generating teaching space raises the cost per workplace to £490. Timetabling is a predictive activity and related space utilisation analyses based on timetable data generally over-estimates space efficiency levels and estimated space requirements.

2.3 At 40% space utilisation, the income required per used workplace is £1,225 per year. At 16% space utilisation, this figure rises to £3,062.

In higher education the average annual space costs can be over £200 per square metre. In classrooms at a space utilisation of 40%, the required income per year is £900 per workplace. At a space utilisation level of 25%, the required income per workplace is £1440. The graph showing required income per workplace and space utilisation levels remained similar in form to the one constructed for a further education college.



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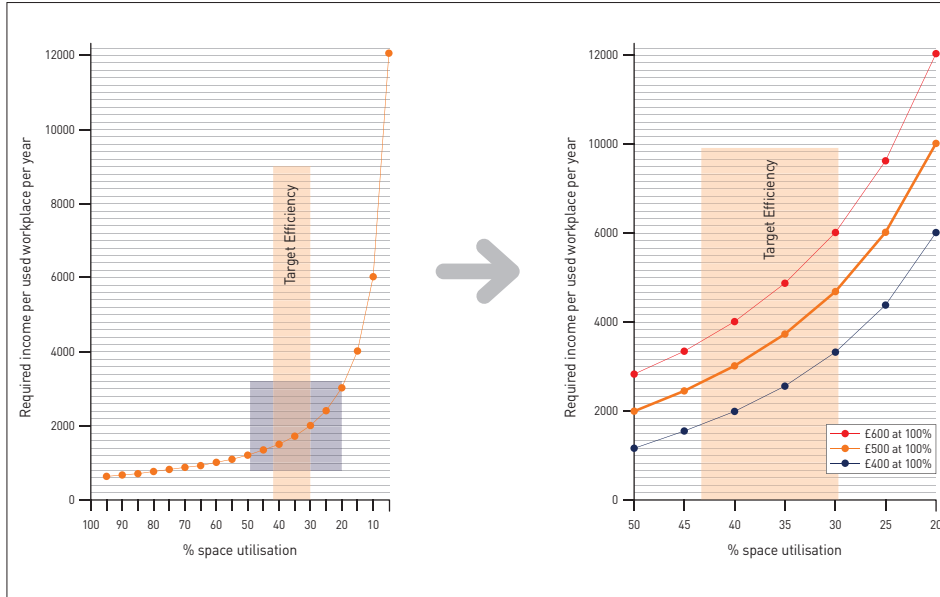
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The required income per used workplace can be plotted in relation to target space utilisation levels.

Figure 1: Space utilisation levels and required income per used workplace



The left hand graph shows the required income per used workplace for values between 10% and 90%. The right hand graph shows the required income per used student workplace in relation to target space utilisation levels.

The modelling of future space requirements should be based on recommended or de facto space norms and target space utilisation levels. Increases in space norms by individual institutions results in higher target space utilisation levels and a progressive reduction in the choice available to teaching staff regarding the time and location of classes.

**3. Successful space modelling based on workable timetables offers a number of benefits.**

- 3.1 Space modelling reduces capital and operating costs whilst supporting the provision of high quality courses.
- 3.2 Appropriate facilities, when used efficiently, have a major impact on the financial viability of courses.
- 3.3 The effective use of teaching and learning facilities helps to maintain well qualified, highly motivated and experienced course teams.

**Space modelling, which takes into account established or planned timetabling procedures, is a vital part of the strategic planning process in colleges and universities.**